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Compliance Complexity and Tax Compliance for Individuals in Pre and Post M-filing Implementation in Malaysia

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ABSTRACT

Background: Mobile filing (m-filing) of tax returns through smartphones is one of the approaches to electronic tax filing. While electronic tax filing was introduced in 2006 in Malaysia, m-filing was only introduced into Malaysian tax system in 2012.

Objective: Here the objective is to examine whether a significant statistical difference exists in tax compliance and compliance complexity under pre and post m-filing implementation in Malaysia.

Methodology: the analysis was conducted using Kolmogorov-Smirnov Z test which is a non-parametric test for comparison of two groups.

Result: the findings revealed that there is a significant statistical difference in tax compliance under pre and post m-filing implementation in Malaysia. Differently, it was found that significant statistical difference exists in compliance complexity under pre and post implementation of m-filing in Malaysia.

Implication: the implication here is that Malaysian tax authority needs to devise other means of enhancing tax compliance apart from compliance complexity. Despite the reduction in complexity of payment procedures, the tax compliance remained unchanged. For other developing countries who desire to reduce compliance complexity, they may implement electronic tax system such as m-filing that can reduce complexity and enhance tax compliance.

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1. Introduction

Mobile Filing (m-filing) is a component of electronic tax filing (ETF) system through which resident individuals pay their taxes through their smartphones. The system was launched in 2012 by Inland Revenue Board Malaysia (Said, 2012). The objective of the m-filing is to enhance online tax filing by individual taxpayers in Malaysia (Said, 2012). The system provides tax filing convenience through selected mobile phones. Thus, with increased utilizations of mobile phone devices, the adoption of the new system has been expected to have a good response from taxpayers. However, this the introduction of m-filing evidence are lacking as to whether or not the new system has reduced compliance complexity, and enhance tax compliance among individual taxpayers in Malaysia.

Therefore, the main objective of the current study is to examine whether there is a difference in compliance complexity as well as tax compliance under pre and post m-filing implementation in Malaysia. The study is expected to cover the period of ten (10) years; that is five (5) years before the introduction of m-filing and five (5) years after the implementation m-filing in Malaysia. The notion here is to investigate whether a significant statistical difference exists in compliance complexity and level tax compliance in pre and post m-filing implementation in Malaysia. The second part of the paper is a literature review. Next, after the literature review is methodology. Followed by the fourth part, that is analysis and discussions. The last part is a conclusion and research implication.

2. Literature Review

M-filing is one of the components of electronic tax filing (ETF). The ETF was first introduced in the United States (US) as a pilot project in 1986 (Schaupp, Carter, & McBride, 2010). However, it only went nationwide in 1990, but with tremendous growth. Despite the tremendous growth recorded in the introduction of e-filing of tax returns, up to 2007 the congress target of capturing 80% of taxpayers into the system has not been reached. Hence, even recently several studies have been conducted for devising ways and means for improving e-filing of tax returns in the country (Schaupp, *et al.*, 2010). Moreover, evidence also indicated that m-filing has also been integrated into the e-tax filing in the US. E-filing via a smartphone is incredibly convenient (Watts, 2013). In the US for example, m-filing is performed using H&R Block's smartphone software, called the 1040EZ App. Using this Smartphone application, a taxpayer can snap a picture of his/her W2 and the software takes the information from the picture and inputs it into your tax forms. In essence, the application of this Smartphone software eliminates a great deal of typing or manual entry of information. Apart from H&R Block's smartphone software, TurboTax has a similar smartphone app for simplified tax returns, with similar photo capabilities. The software of TurboTax is called SnapTax. This application has received more than 8,000 ratings and five stars from users. The developers of the software said that the application download is free, but they charge \$20 to file each return. But for H&R Block's smartphone software, it is a free application for filing federal and state tax returns.

In Asia, countries like the Philippines enables individual taxpayers through pay tax through an electronic cash service provided by a mobile phone company (Araki, 2013). Thus, it was asserted that this method can enhance tax payments among small taxpayers in developing economies. Specifically, in the context of this study, the system of filing a tax return electronically was first introduced in 2006 by Malaysian Inland Revenue Board (IRB). The system was meant to benefit taxpayers both individuals and companies. As at 2010 about 1.25 million taxpayers filed their tax return electronically through the internet (Azmi & Bee, 2010). In order to improve the service delivery by IRB, in 2012 m-filing which is a component of ETF was introduced to enable resident individuals to pay their taxes through smartphones. Recently in 2015, evidence indicated that there is a high level of satisfaction by users of electronic tax filing (Islam, Yusuf, & Bhuiyan, 2015). However, this did not make any comparison of the situation before the introduction of m-filing and after the implementation of m-filing. The major

argument of this paper is whether high level of satisfaction expressed by the users' of ETF is due to the implementation of m-filing which provides convenience to the taxpayers to file their tax returns using selected mobile phones.

Therefore, the main objective of the current study is to examine whether there is a difference in compliance complexity as well as tax compliance under pre and post m-filing implementation in Malaysia. The study is expected to cover the period of ten (10) years; that is five (5) years before the introduction of m-filing and five (5) years after the implementation m-filing in Malaysia. To the researchers' knowledge evidence is lacking to that effect. Thus, to provide empirical evidence on whether or not there is statistically significant difference in compliance complexity and tax compliance in pre and post-SAS implementation the following hypotheses are developed. The hypotheses which would be tested using Kolmogorov-Smirnov test are expressed below.

H₁: There is a significant statistical difference in tax compliance under pre and post implementation of m-filing in Malaysia.

H₂: There is a significant statistical difference in tax complexity under pre and post implementation of m-filing in Malaysia.

3. Methodology

3.1 Data and Samples

The methodology adopted here is quantitative through numerical data. The data was obtained from World Bank Group (WBG) and Price Water Coopers (PWC) via Paying Taxes Report (World Bank Group & Price Water Coopers, 2015). It covers the period of 2007 to 2016. The analysis covered the period of ten years. The ten years are divided into two; five years before the implementation of m-filing (2007, 2008, 2009, 2010, 2011) are considered as pre-implementation period, whilst five years after the implementation of m-filing (2012, 2013, 2014, 2015, 2016) are considered as a post-implementation period. Because the study is concerned with individuals, labor taxes relating to Pay as You Earned (PAYE) were used as proxies, since these are the categories of taxes under Paying Taxes Report which are a concern with individuals.

3.2 Measurements

For the measurement of the two variables, we follow the approached adopted by Gambo, Mas'ud, Nasidi and Oyewole (2014), and Mas'ud, Alkali, and Aliyu (2015). Tax Compliance (COMPLY), was measured by a number of tax payments based on World Bank Group and Price Water Coopers, (2015) data, while Tax Complexity (COMPLEX), was measured to hours it takes to comply with obligations (World Bank Group & Price Water Coopers, 2015).

3.3 Analytical Procedures

Kolmogorov-Smirnov test using Special Packing Social Science (SPSS) version 22 was used to measure whether or not there is a significant difference in mean tax compliance and tax complexity in pre and post m-filing implementation of in Malaysia. It was asserted by Park (2003) that Kolmogorov-Smirnov test is used to compare means of two groups when the parametric assumptions t-test is not fulfilled. In this study, the first group constitutes five years (pre-implementation) and the second group for another five years (post-implementation) of m-filing in Malaysia. So other parametric tests such as independent sample *t*-test cannot be used, since the populations of the two groups are less than 30. Thus, Kolmogorov-Smirnov test is conducted based on null hypotheses that there is not the significant statistical difference between the two groups. This implied that the means values of the two groups are approximately equal. Thus, when the test is significant, the null hypothesis is rejected confirming that

there is the significant statistical difference between the two populations.

4. Result and Discussion

To test for the null hypotheses of the study, we run Kolmogorov-Smirnov test for mean difference among two groups. The test is nonparametric in nature, unlike parametric tests such as independent sample t-test which has assumption relation to sample, population, and normality, Kolmogorov-Smirnov test does not require such assumptions. Therefore, the aim here is to achieve two objectives. On one hand, the study will examine whether there is no significant statistical difference in tax compliance under pre and post implementation of m-filing in Malaysia, on the other hand, the study will examine whether there is no significant statistical difference in compliance complexity under pre and post implementation of m-filing in Malaysia. It is worth noting that the introduction of m-filing enables the taxpayers to file their tax returns using their mobile smartphones which are simpler and convenience to the taxpayers and which hitherto not possible before 2012. Therefore, it is possible to assume that tax compliance might have significantly improved after the introduction of the new system due to enhancement in simplicity and convenience of payment. Similarly, it is also logical to assume that as individuals become much more familiar with the usage of smartphones, filing tax return using such smartphones will reduce the compliance complexity. Thus, there is a possibility that both tax compliance and compliance complexity will be different before and after the implementation of m-filing in Malaysia. The result of the analysis is depicted in Table 1, 2 and 3 below.

Table 1: Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Complexity	10	62.00	116.00	85.300	15.628
Compliance	10	2.00	24.00	6.400	9.276

It can be deduced from Table 1 that the minimum value is 62 while the maximum value is 116 during the 10 years under consideration. This indicates that it takes a minimum of 62 hours to comply with tax obligation and a maximum of 116 hours, which is a measure of tax complexity measured by time. The mean value of complexity is 85 with a standard deviation of 16.627 indications some level of dispersion among the complexity values. Similarly, in each hour, there is a minimum of 2 compliances and maximum of 24 compliances during the 10 years under consideration. Additionally, the mean value of compliance is 6.4 with a standard deviation of 9.276 indications some level of dispersion among values of tax compliance during the period under review. The result in Table 2 depicts the frequency for the number of years used in the analysis.

Table 2: Frequencies

Variables	Group	N
Complexity	Pre m-filing Implementation	5
	Post m-filing Implementation	5
	Total	10
Compliance	Pre m-filing Implementation	5
	Post m-filing Implementation	5
	Total	10

The result in Table 2 showed that the test was conducted for the period of 10 years. These include 5 years before implementation of m-filing (2007, 2008, 2009, 2010, 2011) and 5 years after implementation of m-filing (2012, 2013, 2014, 2015, 2016). This indicated that the test uses equal years for the two regimes. The result in Table 3 presents Kolmogorov-Smirnov Z test Statistics for the test of

the research hypothesis.

Table 3: Kolmogorov-Smirnov Z test Statistics

Variables		Complexity	Compliance
		y	e
Most Extreme	Absolute	1.000	.400
Differences	Positive	.000	.000
	Negative	-1.000	-.400
Kolmogorov-Smirnov Z		1.581	.632
Asymp. Sig. (2-tailed)		.013	.819
	99% Confidence	Lower Bound	.005
	Interval	Upper Bound	.009
			.436
			.462

For testing the study's hypotheses, the result in Table 3 revealed that there is no significant statistical difference in tax compliance under Pre and Post m-filing implementation in Malaysia (*Kolmogorov-Smirnov Z* = 0.632, $p = 0.819$, *lower bound* = 0.436, *upper bound* = 0.462). Hence, it indicated that the hypothesis 1 which postulated that there is a significant statistical difference in tax compliance under pre and post implementation of m-filing in Malaysia is not supported. However, in the case of compliance complexity the result indicated that there is a significant statistical difference in compliance complexity under Pre and Post m-filing implementation in Malaysia (*Kolmogorov-Smirnov Z* = 1.581, $p = 0.013$, *lower bound* = 0.005, *upper bound* = 0.009). Thus, hypothesis 2 which postulated that there is a significant statistical difference in compliance complexity under pre and post implementation of m-filing in Malaysia is supported.

Though the result of Kolmogorov-Smirnov Z test gives us the indication whether or not a significant difference exists between the two periods, there is also the need to understand the trend in both compliance complexity and tax compliance over the two periods. This, in essence, can depict the direction of the difference whether increasing or decreasing trends for both compliance complexity and tax compliance in the two periods. Thus, the results of the trend are contained in Fig. 1 and 2 below.

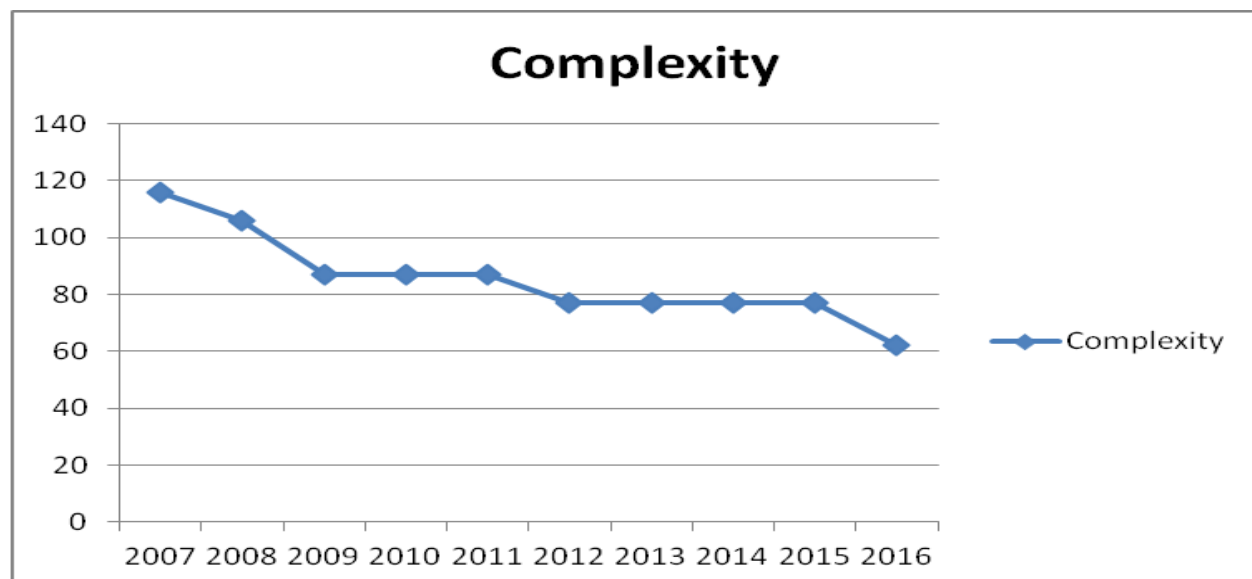


Fig. 1: Trend in Compliance Complexity over 10 Years.

It can be seen from Fig. 1 that compliance complexity reduced to all times low over the period of 10 years in 2016 which is part of Post implementation period. The initial decline below 80 hours began in 2012 after the implementation of m-filing. It is quite convincing that this Fig is in support of the result in Table 3 above.

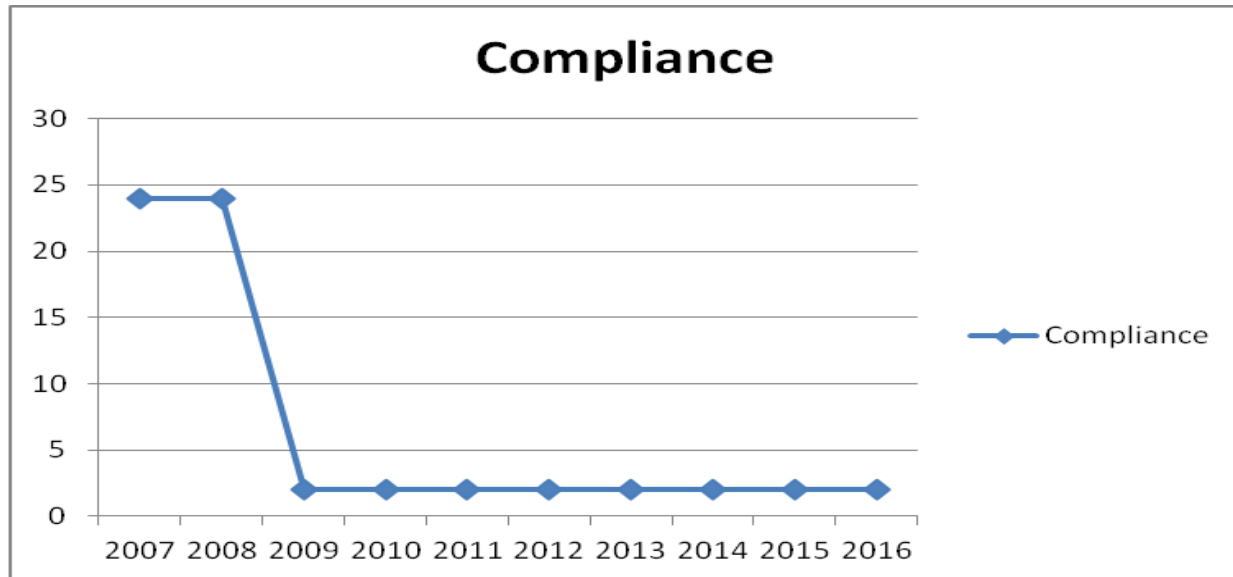


Fig. 2: Trend in Tax Compliance over 10 Years.

It can be seen from Fig 2 that tax compliance has remained static since 2009 up to 2016. These years cut-across Pre and post implementation period. Thus, the picture in Fig 2 supports the statistical result in Table 3 that there is no significant statistical difference in tax compliance under Pre and Post m-filing implementation in Malaysia.

5. Conclusion

The study examines whether or not there is a significant statistical difference in tax compliance and compliance complexity under pre and post m-filing implementation in Malaysia. It was revealed by the result that there is no significant statistical difference in tax compliance under pre and post m-filing implementation in Malaysia. Further analysis revealed that tax compliance in Malaysia remained static from 2009 to 2016. These years cut-across periods of pre and post m-filing implementation, thus, implying that the difference is not significant in the two periods under consideration. It was also revealed by the findings that significant statistical difference exists in compliance complexity under pre and post m-filing implementation. Extensive analysis revealed that tax complexity reduced significantly after the implementation of m-filing in Malaysia.

The study has important policy implication for Malaysia and other developing countries. Malaysia needs to double check on a possible factor that deters tax compliance. Normally, it is expected that compliance complexity is negatively related to tax compliance, implying that reducing complexity can enhance tax compliance. However, here the result implied that while compliance complexity reduces, tax compliance remains static over 2009 to 2016. Thus, there is a need to investigate other possible determinants of tax compliance. Based on the results obtained here it can be argued that the static nature of tax compliance in Malaysia is not attached to the complexity of payment procedures since the introduction of m-filing in 2012, but can be attributed to other factors.

For other developing countries, there is the need for them to implement e-payments mechanisms such as m-filing through smartphones. This is due to it is simplicity and accessibility of both the phone and the internet facilities among the individual taxpayers. Evidence from this study implied that implementation of electronic tax filing mechanisms such as m-filing reduces compliance complexity. In fact, literature documented that simplification of payment procedures enhances tax compliance. Thus, implementation of m-filing methods is hereby recommended to other developing countries to enable them ripe the benefit of reduced complexity and enhanced tax compliance.

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